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Jun Lu

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10/03/2006

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EXAMINER

HASSAN, AURANGZEB

ART UNIT

PAPER NUMBER

2182

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/663,384 | LU ET AL. | |
| | Examiner | Art Unit | |
| | Aurangzeb Hassan | 2182 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 3, 4, 7 and 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 3 recites transferring from a first and second storage medium to a fourth storage medium using a fourth data stream and further based upon a type of data of the data source. As per Claim 4, it is required for the third and fourth medium to transfer data substantially in parallel. As admitted by the applicant in the description of related art the applicant describes deficiencies in the previous art in particular media 40 and 44 on page 5 lines 20 – 23 and page 6 lines 1 – 4 and explicitly states that the use of a fourth storage medium as described in the current claimed invention would cause a lack in efficiency, therefore having a fourth storage medium in the current application as claimed would directly contradict the motivation of the application (see Response to Arguments).

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Claims 7 and 8 recite transfer from the first and second portion of data directly from the third medium to a fourth storage medium, which is not supported in the specification. The specification at best provides support for only a fourth storage medium connected to the media adapter but not to the first and second through a combined stream parallel to the third stream or as a fourth stream directly from the third storage medium to the fourth storage medium.

The specification and remarks fail to provide support as to which storage medium relates to which label, first, second, third or fourth, and how the data stream is allocated according to the specification. The examiner requests that the applicant clarify and fully describe in the disclosure and with labels for the drawings as to what constitutes a first, second, third and fourth storage medium.

The following rejections are made based on the examiner's best interpretation of the claims in light of the 35 USC 112 rejections.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1 thru 6 and 8 thru 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Amundson et al. (US Patent Number 6,154,852 hereinafter "Amundson").

5. As per claims 1, 9 and 11 Amundson teaches a method, system and a recording medium comprising:

dividing a data source into at least a first portion of data and a second portion of data (File Data BLK, element 408, figure 4, column 4, lines 26 – 30);

transferring the first and second portion of data from the data source to a first storage medium and a second storage medium (tape 1 and 2, element 118, figure 2) using a first data stream and a second data stream respectively (column 3, lines 22 – 49);

determining if the first portion of data and the second portion of data can be combined (collaborative file ID 150 provides for a validation of the recovery data recombination process, figure 2, column 6, lines 1 – 22); and

if the first portion of data and the second portion of data can be combined, transferring the first and second portion of data from the first and second storage medium to a third storage medium using a third combined data stream (recovery can be performed using any number of tape drives from a single, column 12, lines 13 – 34).

As per claim 9, a management server (element 102, figure 1), a media agent connected to the management server (I/O Adapter, element 114), a plurality of storage media connected to the media agent (tape drive 1 – N, element 118, figures 1 and 2), and a data source (file data object, element 136, figure 2) connected to the media agent.

6. As per claims 2 and 10 Amundson teaches a method and a system, wherein the transfer from the first and second storage medium to the third storage medium is performed in chunks (split into reasonable chunks, column 11, lines 36 – 47).

7. As per claim 3, Amundson teaches a method comprising:

transferring the first and second portion of data from the first and second storage medium to the third (recovery can be performed using any number of tape drives from a single, column 12, lines 13 – 34) and a fourth storage medium using the third combined data stream and a fourth data stream respectively (column 12, lines 13 – 34); and

wherein the transfer using the third and fourth data stream is performed based on the type of data of the data source (types of data, column 6, lines 36 – 49).

The examiner interprets Amundson to teach a third storage and a fourth storage to be two recovery tapes that are not identical to those used during the backup process (column 12, lines 20 – 23). The recover process involves mounting different tapes that is further interpreted to represent differing streams in connection.

8. As per claim 4, Amundson teaches a method wherein the transfer using the third and fourth data stream is performed substantially in parallel (Enhanced Parallel Backup and Recovery method, column 3, lines 23 – 33).

9. As per claim 5, Amundson teaches a method wherein the transfer using the third data stream is performed based on a client identification of the first and second portion of data (Collaborative File ID, element 150, figure 2, column 5, lines 25 – 32).

10. As per claim 6, Amundson teaches a method wherein the transfer using the third data stream is performed based on respective stream numbers of the first and second streams (column 6, lines 1 – 14).

The collaborative file id allows for proper data stream recombination in the recovery stage as taught by Amundson.

11. As per claim 8, Amundson teaches a method comprising transferring the first and second portion of data from the third storage medium to a fourth storage medium based on respective offsets (header and trailer labels, elements 402, 404, 412, 414, figure 4, column 4, lines 16 – 20) of the first and second portions of data stored on the third storage medium (column 4, lines 9 – 25).

As interpreted in claim 7, the examiner asserts the transfer from third to a fourth storage medium is analogous to an initial backup and as cited for the Enhanced Parallel Backup and Recovery operation the labels are not affected. Thus a backup will include such respective offsets throughout the process.

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12. As per claim 12, Amundson teaches a method for transferring data in a storage system comprising:

dividing a data source into at least a first and a second portion of data (File Data BLK, element 408, figure 4, column 4, lines 26 – 30);

transferring the first and second portion of data from the data source to a first number of pieces of storage media (multiple tape drives, element 118, figure 1 and 2, column 3, lines 22 – 49);

determining if the first portion of data and the second portion of data are combinable (collaborative file ID 150 provides for a validation of the recovery data recombination process, figure 2, column 5, lines 1 – 22); and

transferring the first and second portion of data from the first number of pieces of storage media to a second number of pieces of storage media, the second number being less than the first number (recovery can be performed using any number of tape drives from a single, column 12, lines 13 – 34).

The examiner interprets the first and second stream, as Amundson teaches, to represent the connection between the first two tape drives in the backup process respectively. The examiner further interprets the recovery process combining at least the first and second storage media into the third single recovery tape drive media. Amundson teaches a system where a primary set of streams is used in a backup process and upon completion a recovery process combines data from the backup tapes into the recovery tapes.

13. As per claim 13, Amundson teaches a method additionally comprising providing a user notification if the first portion of data and the second portion of data cannot be combined (status for user, column 5, lines 7 – 18).

14. As per claim 14, Amundson teaches a method wherein the first portion of data is associated with a first application and the second portion of data is associated with a second application (multiple user applications 131, figure 2).

15. As per claim 15, Amundson teaches a system wherein the first storage medium has a faster access time than the third storage medium (faster access time of the first storage medium can be modified at the user's discretion to achieve faster backup and restore, column 1 lines 29 – 32).

16. As per claim 16, Amundson teaches a system wherein the first storage medium comprises a magnetic medium (figure 2, tape media used).

17. As per claim 17, Amundson teaches a system wherein the third storage medium comprises a tape medium (figure 2, tape media used).

18. As per claim 19, Amundson teaches a system comprising an archive module configured to store at least one storage policy relating to transferring the first and

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second portions of data (storage policy is the save/restore data policy, column 4, lines 26 – 55).

19. As per claim 20, Amundson teaches a system wherein the media agent is further configured to access the storage policy to determine if the first portion of data and the second portion of data are combinable (collaborative file ID 150 provides for a validation of the recovery data recombination process, figure 2, column 5, lines 1 – 22).

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amundson in view of Largman et al. (US Publication Number 2004/0210796 hereinafter Largman).

22. As per claim 7, Amundson teaches a method comprising transferring the first and second portion of data from the third storage medium to a forth storage medium (column 3, lines 50 – 61).

Claim 7 recites usage of the fourth stream in series with the third stream after a first and second portion of data has been combined into the third storage medium. The examiner notes Amundson's invention can be utilized in multiplicity and views the third storage medium to be further backed up, i.e. a tape medium can be backed up and recovered in multiple instances with multiple independent storage devices at the users discretion. Accordingly the examiner rejects the fourth stream and fourth storage medium on the grounds of further backing up the restored medium in the embodiment of the third storage medium. According to Amundson the third storage medium can be backed up using a fourth stream and fourth storage medium through the backup process.

Amundson fails to teach a method comprising transferring the first and second portion of data from a third storage medium to a forth storage medium based on respective times when the first and second portions of data were created.

Largman teaches in an analogous method, transferring the first and second portion of data from a third storage medium to a forth storage medium based on respective times when the first and second portions of data were created (creation date, paragraph [0336] lines 1 – 6).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method of Amundson with the above teachings of Largman. One of ordinary skill in the art at the time of the applicant's invention would have been motivated to make such modifications in order to facilitate freedom for the user defined restoration as suggested by the reference (paragraph [0336], lines 1 – 4).

23. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amundson in view of Sikha (US Publication Number 2006/0149889).

24. As per claim 18, Amundson teaches a system wherein the first storage medium comprises a medium.

Amundson does not explicitly disclose the first storage medium being an optical medium.

Sikha analogously teaches a system wherein a medium comprises an optical medium (paragraph [0005]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Amundson with the above teachings of Sikha. One of ordinary skill would be motivated to make such modifications in order to provide flexibility to restore all data in a given system (paragraph [0005]).

Response to Arguments

25. Applicant's arguments filed 6/27/2006 have been fully considered but they are not persuasive.

Argument 1: In regards to the 112 1st rejection cited in the first office action on 3/28/2006 for lack of support in the specification the applicant argues that sufficient information is provided to enable a skilled artisan to make and use the claimed invention

without undue experimentation. The claimed invention stated transferring data from a first and second storage medium to a fourth storage medium.

Argument 2: The newly amended claims disclose determining if first and second portions of data can be combined is not disclosed in Amundson.

26. As per argument 1 the examiner respectfully disagrees. In the specification the applicant does not support a fourth storage medium, which would have to be supplied with data via a combined stream from the first and second storage medium. From figure 2 of the applicant's invention one could label a first, second, third and fourth storage medium however none which support the claimed fourth storage medium. Another fourth device could be interpreted, as the backup to the third storage medium yet again does not fulfill the requirements of the fourth storage medium. Furthermore in the description of related art the applicant describes deficiencies in the previous art in particular media 40 and 44 on page 5 lines 20 – 23 and page 6 lines 1 – 4 and explicitly states that the use of a fourth storage medium as described in the current claimed invention would cause a lack in efficiency, therefore having a fourth storage medium in the current application as claimed would directly contradict the motivation of the application. Therefore the examiner is unclear as to how one of ordinary skill in the art in light of the motivation of the current application would make and use the claimed invention without undue experimentation.

27. As per argument 2, the examiner respectfully disagrees. For the newly added limitations the examiner has provided appropriate citations as seen from the rejection of claims 1, 9 and 11 in item number 5 above. From the addition citations provided for the newly amended claims one can see that Amundson has met a determining combinability characteristic.

Conclusion

28. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aurangzeb Hassan whose telephone number is (571)


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272-8625. The examiner can normally be reached on Monday - Friday 9 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AH



KIM HUYNH
SUPERVISORY PATENT EXAMINER
9/29/06